

A Strategic Direction

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STI PROGRAM
SCIENTIFIC &
TECHNICAL
INFORMATION

*"The United States must make better use of
its scientific and technical information (STI)
resources, if it wishes to be competitive in
world markets and maintain its leadership ...
The Federal Government has a golden
opportunity to help the United States sustain
a competitive position in scientific and
technical information."*

Helping America Compete - The Role of Federal
Scientific and Technical Information
United States Congress
Office of Technology Assessment

MESSAGE FROM THE DIRECTOR

The value of a strong Federal STI program is stated very clearly in the Office of Technology Assessment (OTA) report. As one of the Federal agencies responsible for the production of a vast quantity of STI, NASA is in a key position to aid the overall effort to exploit this resource to the fullest extent possible. The NASA STI Program is tasked within the agency to ensure that appropriate STI from all over the world is collected, value-enhanced, stored, and disseminated to the authorized user community.

As we approach the year 2000, there are many exciting opportunities for revolutionizing the way STI is managed, thereby increasing its value to NASA, the U.S., and our international partners. Rapid advances in information management and communications technology have placed new service and product strategies well within our reach. In fact, the Congressional Report quoted above went on to say that "the United States has, at

the moment, the necessary information and technology base on which to build a strong national effort." The challenge, then, is to apply available resources to those options that will maximize customer utility while achieving cost-efficiencies. To do that, we must have a focus on future opportunities, customer requirements, and programmatic goals.

This strategic plan identifies the goals of the NASA STI Program and the implementation strategies by which to achieve those goals. It was developed with input from all segments of the Program, including users, other Federal agencies, and international exchange partners. Annual reviews of the plan will give it the flexibility to vary and grow in concert with user needs, and allow it to keep pace with technology and available resources.

We welcome your comments and suggestions on this plan.

Gladys Cotter
September 1991

MISSION

The mission of the NASA Scientific and Technical Information (STI) Program is to support the advancement of aerospace knowledge, contribute to U.S. competitiveness, and become an integral partner in NASA research and development (R&D) programs to support NASA goals.

The focus of our effort will be the development of a global program to encourage the creation and exchange of STI and facilitate its use as well as to provide leadership in advancing information science research and integrating state of the art technology into STI activities.

**GOAL 1: ESTABLISH THE STI
PROGRAM AS AN INTEGRAL PART
OF THE NASA R&D EFFORT**

OBJECTIVES:

- Establish the STI Program as a part of the R&D strategic planning process.
- Secure STI as a line item in the R&D budget.
- Set up a direct association with R&D staff to disseminate data.

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IMPLEMENTATION STRATEGIES:

Understand how STI operations became a part of R&D in other agencies. To assist in this task, establish the STI Council, which consists of members of the R&D management community.

Develop plans to inform and demonstrate the STI Program capabilities, which involves including senior R&D managers in STI meetings and agendas; increasing STI staff participation in professional societies and expos where members of the R&D community congregate; and establishing marketing representatives in Program Codes and NASA Centers.

GOAL 2: IMPLEMENT EFFECTIVE MANAGEMENT STRATEGIES

OBJECTIVES:

- Ensure that the STI Program has adequate staff and budget to support Program objectives.
- Elevate the Program in the user community so that opinion surveys have positive results for the Program.
- Develop an STI Master Plan, which incorporates the objectives and implementation strategies for the Program, and obtain the authority to implement the plan from NASA management.

IMPLEMENTATION STRATEGIES:

Integrate Program goals and implementation strategies into an STI Master Plan. This plan will include Program strategies such as: restructuring of organizational structure that supports the new goals and strategies; restructuring and renegotiating support contracts; identifying management issues and determining resolutions.

Identify opportunities within NASA and develop a business case for selected opportunities to support the STI needs of NASA.

Create a survey to identify issues and to determine the satisfaction baseline of the user community. Review survey results and establish a resolution action plan.

GOAL 3: IMPROVE CURRENT OPERATIONS

OBJECTIVES:

- Establish Operations Overview Committee
- No repeat service deficiencies
- Agency recognition for efficient operations
- Utilize current technology to maximum efficiency

IMPLEMENTATION STRATEGIES:

Develop guidelines and objectives for Operations Overview Committee. Solicit representatives based on requirements of the NASA community.

Make sure that all deficiencies in service are reported to management. Identify corrective actions. Ensure actions are implemented. Periodically review.

Ensure that streamlined and efficient operations are recognized by NASA.

Identify technologies as replacements for existing equipment, procedures, and processes.

GOAL 4: ACCOMPLISH RAPID DEPLOYMENT OF THE NASA STI NETWORK

OBJECTIVES:

- Link all NASA R&D communities to a worldwide network for sources of STI.
- Enhance and improve access to STI resources for the R&D community.
- Create new value-adding tools to facilitate access and usability of resources for the user community.

IMPLEMENTATION STRATEGIES:

Define the user community and determine the user requirements for STI.

According to the user requirements, define the STI network environment: hardware, software, existing telecommunications networks. Some examples are NREN, PSCN, and NSInet.

Determine desirable STI resources and establish formal agreements with the owners.

Inventory and evaluate existing value-adding tools. Select, customize, and/or link to existing value-adding tools in order to incorporate the functionality into the NASA STI network.

GOAL 5: SEEK OUT AND DEVELOP COOPERATIVE PARTNERSHIPS

OBJECTIVES:

- Negotiate partnership with NASA Centers, network members, suppliers, etc.
- Actively participate in interagency working groups and committees related to STI.
- Encourage joint strategic planning with NASA program offices.
- Set up stable, recurring incoming funds from participants.

IMPLEMENTATION STRATEGIES:

Establish a two-way exchange of personnel and expertise between NASA Headquarters and the NASA centers in order to share resources and expertise in areas of common interest and activity to support agency-wide STI Program objectives.

Identify current STI working groups and committees and establish membership.

Propose and initiate projects for participation by NASA program offices. Establish an active program advisory board with high-level program office participation in order to establish line items in the budget.

Develop a marketing plan and sell the STI Program capabilities to targeted participants. This includes the creation of new products and services; the ability to match similar needs of partners to optimize costs; facilitation of transfer of funds from one organization to another; and the execution of the Program with quality results.

GOAL 6: ENHANCE THE QUALITY OF OUR PRODUCTS AND SERVICES THROUGH A FOCUS ON THE CUSTOMER

OBJECTIVES:

- Promote customer satisfaction and encourage ongoing feedback.
- Develop a new and expanded product mix.
- Put effective user groups into place.
- Establish a proactive user services group.

IMPLEMENTATION STRATEGIES:

Establish a mechanism to gather data on systems, files, products, and services on a reiterative basis from the user community. Design and implement a user profile and requirements database that can be updated.

Improve existing products and services and propose new products and services based on user requirements.

Define a hierarchy of user groups and encourage both NASA and non-NASA participation. Institutionalize NASA STI Users Conferences on an annual basis.

Establish a formal User Services Group within the STI Program office in NASA Headquarters to address user issues.

GOAL 7: BUILD AN ATTITUDE OF QUALITY THROUGHOUT THE ENTERPRISE

OBJECTIVES:

- Further confidence of others in the work, products, and services of the STI Program.
- Sustain a high level of employee and contractor satisfaction, which in turn will promote an attitude of quality in the Program.

IMPLEMENTATION STRATEGIES:

Establish an interactive Quality Assurance program with an error alert and correction process. This includes the incorporation of standards into STI processing; the insertion of questions on user surveys to measure quality from the user perspective; and a mechanism for handling issues related to quality successfully.

Develop an awards program for STI employees, NASA-wide authors, and contractors to encourage quality participation.

Hold monthly staff meetings because knowledge translates into quality.

GOAL 8: EXPAND THE EXISTING PARTICIPANT COMMUNITY

OBJECTIVES:

- Instigate increased R&D management participation in STI activities.
- Bring about a 10% per year increase in the number of new users.
- Ensure an increase in the number of delivered "information units."
- Establish a reimbursement program so customers can pay for tailored services.
- Ensure the NASA centers host STI meetings.

IMPLEMENTATION STRATEGIES:

To increase the awareness of the STI Program, develop comprehensive marketing plans to address segments of the user community as they are defined by organization category, product usage, and service usage. The marketing plans will be developed according to the user profile and requirements information that is collected for the user requirements database.

Develop and implement a plan for the co-location of STI representatives with specified segments of the user community, such as NASA program codes and NASA centers.

To encourage and promote an increase in two-way communications between the user community and the STI Program, ensure that the Center for AeroSpace Information (CASI) communications representatives have a point of contact with the communications representatives within the program codes and NASA centers. Establish the STI Bulletin as a communications tool to help keep users informed. Develop an electronic bulletin board.

GOAL 9: EXPAND INTERNATIONAL INVOLVEMENT

OBJECTIVES:

- Increase comprehensiveness of foreign materials
- Expand NASA STI international exchange program
- Mutual development of databases and software
- Share translations

IMPLEMENTATION STRATEGIES:

Identify gaps in coverage of foreign materials. Target acquisitions efforts. Review current exchange agreements. Identify additional countries for exchange. Develop a plan to increase participation by current and future partners. Review databases and software developed by foreign producers such as ESA and Germany to identify common areas. Begin to share software and to jointly develop new databases. Research translations capabilities of foreign exchange partners. If cost effective, develop a plan for a cooperative translations program.

GOAL 10: ASSERT A NASA LEADERSHIP ROLE FOR STI POLICY

OBJECTIVES:

- Foster active participation of NASA STI Program representatives on national and international planning and standards groups.
- Establish a level of expertise such that NASA STI representatives are invited to present papers at policy groups, to give Congressional testimony related to STI, and are invited to participate in Cabinet-level STI policy groups.
- Establish the NASA STI Program as a recognized leader in STI.

IMPLEMENTATION STRATEGIES:

Identify policy groups that are addressing issues of information management relevant to the access and dissemination of STI in which the STI Program should participate.

Submit NASA STI position papers on relevant policy issues.

GOAL 11: DEVELOP A PROGRAM FOR INFORMATION SCIENCE R&D

OBJECTIVES:

- Generate one RTOP per year for Code NTT.
- Encourage the NASA STI Program to publish papers about information R&D in journals.
- Create internships for university students.
- Establish an STI R&D Center with an ongoing Information Science R&D Program.

IMPLEMENTATION STRATEGIES:

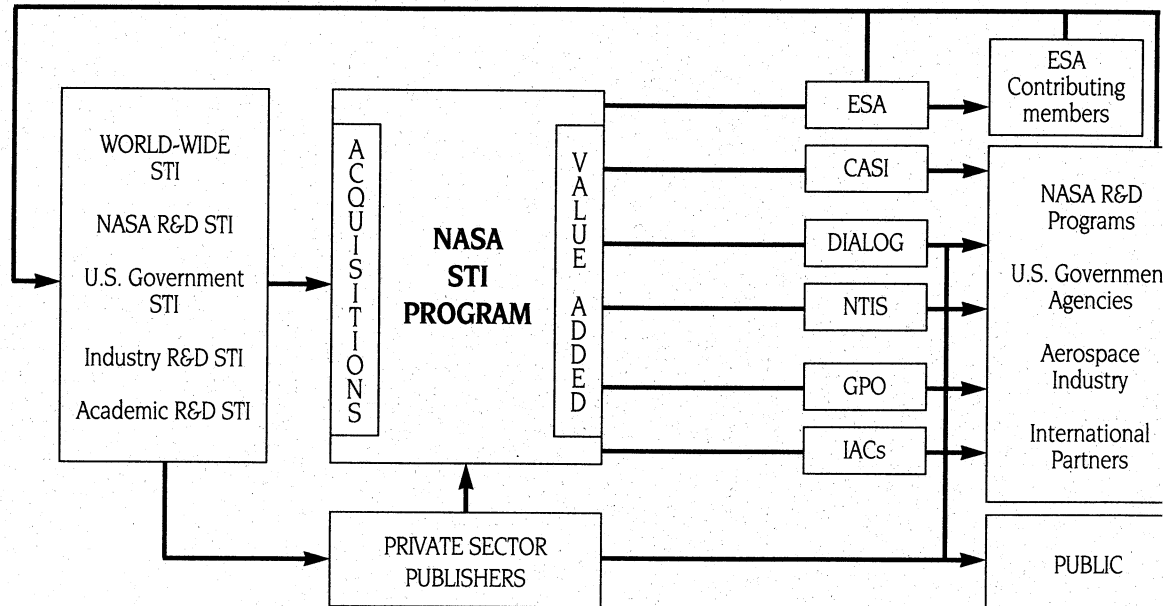
Investigate and prepare RTOPs for appropriate R&D efforts. Include NASA technologies that are applicable to STI.

Develop an intern program, which involves establishing relationships with universities and awarding grants for STI graduate degree studies.

Develop R&D Center concepts and schedule presentations of concepts to agency offices.
Develop an RTOP proposal to establish the Center.

Flow of NASA SCIENTIFIC & TECHNICAL INFORMATION

STI Fuels and Supports R&D



R&D Activity Produces STI

ABBREVIATIONS:

NTIS: National Technical Information Service

GPO: Government Printing Office

IACs: Industrial Application Centers

ESA: European Space Agency

CASI: Center for AeroSpace Information

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